

Seroprevalence and molecular detection of leptospirosis from a dog shelter

ABSTRACT

A study on seroprevalence and molecular detection of canine leptospirosis was carried out in a dog population (randomly selected $n=80$ dogs) from an animal shelter X. All the dogs in Shelter X appeared clinically healthy. Eighty blood samples were obtained and their serum were serologically examined using Microscopic Agglutination Test (MAT) against 10 *Leptospira* serovars. Plasma samples obtained were subjected to Polymerase Chain Reaction (PCR) assay. Three out of 80 dogs (3.8%) tested positive for *L. bataviae* based on MAT at a titer of 1:80. The seroprevalence of 9 other *Leptospira* serovars was not evident in this study. All the dogs tested negative against leptospirosis with PCR assay. In conclusion, canine leptospirosis was detected in dogs in this animal shelter. *L. bataviae* was identified as the infecting serovar. To our knowledge, this is the second report of serovar Bataviae infection in dogs in Malaysia. The 3 dogs in our study could possibly be a source of leptospiral infection to other dogs and may shed the bacteria into the environment. This serovar is not available in canine vaccination programs, therefore the dogs are not protected from this disease. Further investigation is warranted to determine whether the infected dogs are carriers of this serovar.

Keyword: Seroprevalence; Molecular detection; Leptospirosis; Dog shelter